1 WHY HEALTH ECONOMICS?

Almost everyone in the world has a good reason to care about health economics. The following quiz can determine whether or not health economics is important to you:

- Do you have finite resources to draw upon in case you get sick?
- Are you incapable of predicting the future with perfect accuracy?
- Do you live in a country that levies taxes on its citizens?

If you answered "yes" to any of these questions, health economics is important to your well-being, and understanding it can make you healthier and happier. (Or perhaps you will be happier once you get *less* healthy. We will discuss that possibility in Chapter 3.)

Health economics is not just an alphabet soup of esoteric acronyms like HMO and QALY. Nor is it an endless droning debate about arcane minutiae pertaining to the national budget. Instead, it is a lively field where we study real-life health decisions: why people lie to insurance companies about their health, why people smoke even when they know exactly how bad it is for them, and why health insurance might make you fat. Understanding health economics not only helps you make better decisions about your health, it is also inherently intriguing and compelling, even fun.

Understanding health economics is vital. Our argument rests on three facts: the health care economy is massive and expensive; health is a major source of uncertainty and risk; and governments around the world are deeply involved in financing health care systems.

1.1 The health care economy is massive

The gross domestic product (GDP) of the US in 2008 was just about $14 trillion. This means that $14 trillion worth of economic activity took place in the US that year. People spent money on a mind-bogglingly vast array of goods and services: meals at restaurants, baseball tickets, gasoline, new houses and cars, raw materials and machinery for factories, salaries for soldiers and schoolteachers, and retirement benefits (to name just a few).

Perhaps even more mind-boggling is the fact that one out of every six dollars spent in the US that year was spent on health care, to pay for things like checkups at the doctor's office, bariatric surgeries, anti-cholesterol medicines, and new investments in medical research. This statistic is all the more shocking when we compare today's mammoth health care sector to that of fifty years ago. In 1960, barely one out of every *twenty* dollars spent in the US went toward health care.

The trend has been similar in countries around the world, although no one spends quite as much on health care as Americans. In the past hundred years, the health care sector has grown massively across the developed world. Part of the story of this expansion in health care has to do with the wealth of scientific discoveries and technological improvements that have occurred in the last century, as we will see in Chapter 13. Today, billions are

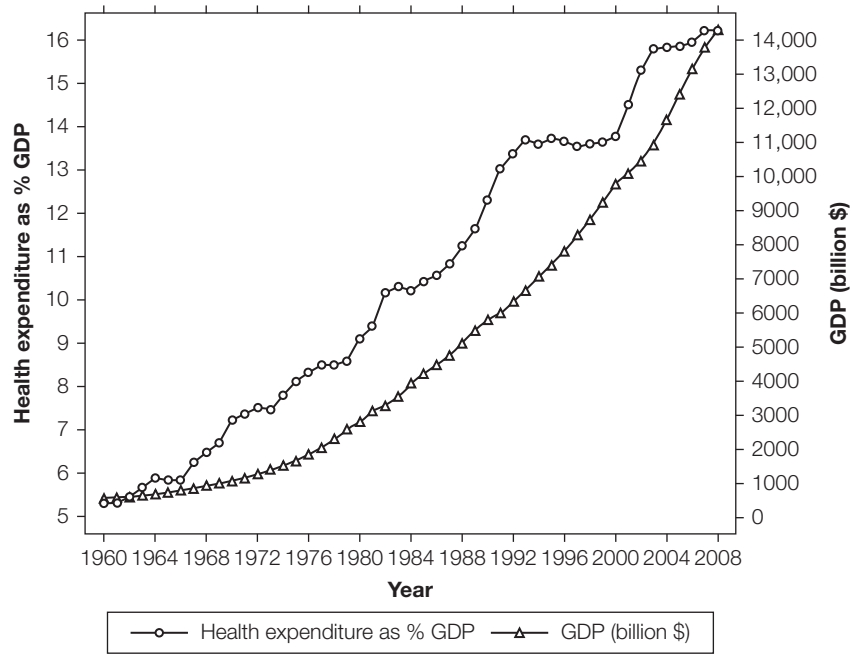

Figure 1.1. *Health care expenditure as a proportion of US GDP, 1960–present.*

Source: Data from the US Center for Medicare and Medicaid Services, Office of the Actuary.

spent on insulin, antibiotics, chemotherapy, open heart surgery, and blood transfusions – but none of these things even existed in 1900.

The size of the health care sector also means that millions of people make a living working in the health care sector. In Chapters 5, 6, and 12 we will explore the role of doctors, hospitals, and drug companies in the health care economy, and learn about some unusual features of the markets for their services.

What do we get for all of this money we spend on health care? And are we spending too much or too little? Health care can certainly extend lifespans and improve quality of life, but then Americans, for all of their expenditures, are not the longest-living or healthiest people on the globe. These complicated questions are examined in much more depth in Chapter 14.

1.2 Health is uncertain and contagious

So the health care sector is quite large, but why are the economics of health any *different* from the economics at work in other, smaller markets, like the market for televisions or the market for bananas? Basic economic theory concludes that any competitive market, in the absence of externalities and asymmetric information, will produce an efficient outcome where there is no way to make anyone better off without making someone else worse off. Why should we assume that the market for health care is operating inefficiently or in need of any government intervention? For many years, economists did not treat health economics differently at all. But a seminal paper published in 1963 by Stanford professor Kenneth Arrow established health economics as its own field of study.

Arrow argued that health is different from other goods, and a source of "special economic problems," for one major reason: *uncertainty*. Most people know roughly how many

Kenneth Arrow, founding father of health economics. Arrow won a Nobel Prize in 1972. Credit: With permission of Kenneth Arrow.

televisions or bananas they are likely to buy in the next week, but demand for health care is highly uncertain. An unforeseen broken leg or heart attack can suddenly create demand for expensive health care services. Because most people are averse to risk, health-related uncertainty is unpleasant and, as we will see in Chapter 7, this uncertainty motivates individuals to demand health insurance.

The ubiquity of insurance in health care distinguishes it from other markets. Insurance markets are peculiar because they feature information asymmetries between buyers and sellers. Simply put, health insurance customers tend to know more about their health risks than insurance companies do. This would not be a problem if sickly insurance customers volunteered information about their health. But this is not in their self-interest because health insurers would charge them more for coverage. Instead, sickly customers have a strong incentive to masquerade as healthy customers. In a sense, most of the problems in health economics stem from the fact that people have every incentive to lie about their health. In Chapters 8 through 11, we will discuss the twin problems that arise in markets with information asymmetry: *adverse selection* and *moral hazard*.

Additionally, health care markets are rife with externalities because health status is a uniquely contagious quantity. It probably does not matter very much to you if your neighbor decides to purchase a television or eat a banana. But it certainly does matter if your co-workers decide to skip their flu shots or come to the office with tuberculosis. The fact that other people's health decisions affect you – and that your health decisions affect others – can undermine the efficient functioning of markets. In Chapters 20 through 22, we discuss health externalities and the economics of public health.

1.3 Health economics is public finance

Headquarters of the world's largest health insurance company? The US Capitol Building in Washington, DC. Credit: Image Source.

So health care is expensive, and health is a source of uncertainty and externalities. But what if you are healthy, face little risk of falling ill, and have generous insurance coverage to pay for treatment if you do? Even then, health economics should still be of interest to you because governments are deeply involved in the health care economy. Each year, the size of your tax bill depends greatly on the decisions of politicians and bureaucrats about how to manage your nation's health care system.

The prominent role of governments in health care goes as far back as the 1880s, when German Chancellor Otto von Bismarck established a national health care system to gain political advantage over the Socialist Party. After World War II, more governments became extensively involved in health care markets as many countries introduced new government-financed insurance programs. Notable examples include national, single-payer health insurance systems like the National Health Service (NHS), in the UK and Medicare and Medicaid in the US.

By 2008, when one out of every six dollars spent in America was spent on health care, one out of every two of those dollars was spent by the government. And this is in a country with a health system that is relatively private. In countries like the UK, Sweden, and Canada, the government is responsible for the vast majority of health care expenditures. In Chapter 15, we introduce the range of health policy options that countries use to steward their health care systems.

The pressure on governments to finance the costs of health care will grow in the coming decades. As we will see in Chapter 19, increasing life expectancies and aging populations throughout the developed world will place enormous stress on public health insurance systems which are responsible for paying for health care. In addition, governments will have to cope with ongoing questions about whether or not to pay for expensive new medical technologies.

Together, these trends imply that health care will be an ever-growing item on government balance sheets. The critical role that governments play in health care means that all taxpayers – even healthy and rich ones – have a stake in ongoing political debates about uninsurance, cost-effectiveness, and the regulation of health care markets.

1.4 Welfare economics

Given the major role of government in health care, and the high stakes of the debate for taxpayers and patients, disagreement in health policy debates is inevitable. In practice, debates about health policy are among the most emotional and vociferous in all of politics. Sometimes these disagreements turn on *normative* issues, which are different ideas of how the world should be. Some people feel that adequate health care is a human right, while others feel that no government should be allowed to force anyone to purchase health insurance. These are philosophical questions that no amount of economic analysis can resolve.

But all too often these debates concern *positive* issues, which are different ideas of how the world actually is. One role of health economics is to decrease the level of unnecessary disagreement about health policy by determining positive facts. Do strict patent protections for newly developed drugs increase innovation? How much will it cost Medicare to pay for a new expensive type of laproscopic surgery? Does a tax on fatty foods save money and make people healthier? How much would consumers save if individuals without medical degrees were allowed to offer health care services just like doctors? Unlike normative questions, these questions are amenable to careful economic reasoning.

In order to answer these questions, though, we need a coherent way of thinking that allows us to measure the costs and benefits of any policy proposal. Throughout this book we use the principles of *welfare economics*, an approach that will be familiar to most economics students. The central contention of welfare economics is that people know what is best for them. Their preferences – as revealed by their choices under constraints – are the best guide for determining good policy.

But welfare economics, as useful as it is for analyzing health economics, is not universally accepted. We end the book with Chapters 23 and 24, which cover prospect theory and time inconsistency, respectively. These chapters cover *behavioral economics*, a growing field that challenges the fundamental assumptions of the welfare economics framework and calls into question much of what we think we know about health economics.

1.5 A special note for non-American readers

If you live and receive health care in a country other than the US, a few of the topics we discuss in this book that make sense to American students will seem, well, foreign. In

many countries, including Canada and the UK, patients almost never pay directly out of their own pockets when they receive basic health care, except for peripheral services like dentistry and prescription drugs. But in the US, patients sometimes pay out of pocket for routine health care like flu shots and visits to the doctor.

Another major difference is that, in almost all developed countries, uninsurance is extremely rare or even nonexistent. Insurance is either provided for free by the government, or provided by a mix of public and private insurers. But in America, some people are not eligible for government insurance and cannot afford (or do not want) to buy private insurance.

Paying out of pocket for health care and going without insurance may be unfamiliar at first, but these concepts will come up over and over again in this book. This is because we focus largely on private markets for health insurance and for health care. This may seem a strange choice given that, as we have just pointed out, so much of the world's health care is not delivered this way. But learning how health insurance and hospitals work in private markets is key for understanding two major health economics concepts: adverse selection and moral hazard. It is also crucial to understanding what motivates other countries to operate their systems in other ways.

Because the US currently provides the best examples of private health insurance markets and private markets for hospitals and doctors, much of the evidence we study will come from American data. Then, in Chapters 15 through 18, we will turn to a discussion of international health policy. By that point, we will have spent enough time understanding private markets to think intelligently about the vast array of policies in place in different countries. Understanding the economics of private health markets provides a deep insight into the functioning and tradeoffs implicit in public health provision.

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